Claims

1. Method for obtaining a correctively adjusted output signal from the measuring signal, having a periodic pressure dependence, of a lambda probe (4) located in the exhaust of an internal combustion engine (1) whereby said measuring signal is sampled in a time-slot pattern and averaged through totaling over a specified summation period, said period corresponding to the period of oscillation (TP1, TP2), dependent on engine speed, of pressure pulsations of the exhaust

characterized in that

- the continuously sampled individual values of the measuring signal are buffered in a memory area of a memory (11) of a control device (8) for the internal combustion engine (1), and
- in that averaging that includes a number N1, corresponding to the summation period, of individual values sampled in the time-slot pattern is initiated by the control device (8) at each instant (t_n) at which an updated probe output signal is required,
- wherein totaling is carried out across the N1 individual values block-by-block and already starts before the update time (t_n) so that the block values already formed continuously block-by-block up to the update time (t_n) and buffered instead of the respective individual values are used for calculating an average.

2. Method according to claim 1

characterized in that block-by-block totaling is carried out over in each case M1 sequentially sampled and buffered individual values (M1 block) and is performed in a block time-slot pattern corresponding to M1 times the sampling time-slot pattern (sampling rate), and in that the update

times (t_n) are synchronized with the M1 block time-slot pattern.

3. Method according to claim 2
characterized in that in cases where the number N1 does not correspond to a multiple N of M1 the first N1-N*M1 individual values in the last sampled M1 block that extend beyond a maximum multiple N*M1 are included individually in a current averaging, while the remaining individual values in said M1 block are left out of consideration and are only included in the averaging following the current averaging in the form of a block value to be formed for this entire M1 block and buffered.

4. Method according to claim 2
characterized in that

- in cases where the number N1 does not correspond to a multiple N of M1, each M1 block is split into two partial blocks B1 and B2,
- wherein the partial block B2 contains the last N1-N*M1 individual values in the respective M1 block that extend beyond a maximum multiple N*M1 and wherein the partial block B1 contains the remaining first M1-(N1-N*M1) individual values in the M1 block,
- in that the two respective partial blocks B1 and B2 are totaled block-by-block in a block time-slot pattern into partial block values MW_B1 and MW_B2, which are buffered in place of the respective individual values,
- and in that the two partial block values in the N last processed M1 blocks and the partial block value MW_B2 of the M1 block processed immediately before the N last M1 blocks are used for current averaging.

5. Method according to claim 4

characterized in that in the case of at least one of the processed M1 blocks one of the two partial block lengths is also buffered until current averaging.

6. Method according to one of claims 1 to 5 characterized in that the memory area is operated in the ring memory mode.

7. Method according to one of claims 1 to 6 characterized in that the measuring signal of a lambda probe (4) which has a continuous characteristic curve of said measuring signal and which is located upstream of a catalytic converter (5) of the internal combustion engine (1) is evaluated.